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EXAMINER	
SHIVERS, ASHLEY L	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/829,539	TAYLOR ET AL.	
	Examiner	Art Unit	
	ASHLEY L. SHIVERS	2419	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 August 2009 (RCE)*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11,15-23 and 26-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11,15-23 and 26-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *13 August 2009* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 13, 2009 has been entered.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a) because they fail to show component number 585 as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must

be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities:

--Examiner suggests moving [0046] to the end of the specification.

--In [0048] line 6, replace –521— with –501--.

--In [0048] line 7, replace –503— with –523--.

--In [0049] lines 3-7, replace --communication path 505— with –communication path 504--.

--In [0049] line 9-10, replace --communication path 504— with –communication path 505--.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-5, 15-18 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cerciello et al. (**U.S. Patent No. 5,629,938**), hereinafter referred to as Cerciello in view of Sibbitt et al. (**U.S. Patent No. 5,065,392**),hereinafter referred to as Sibbitt.

Regarding claim 1, Cerciello teaches a method for provisioning logical circuits for intermittent use in a data network, the method comprising:

receiving at least one customer order for routing data in the data network (**A request is made for connectivity of a specified bandwidth between the customer premises. A customer requesting a change in service makes that request to an order fulfillment center coupled to the master controller that is maintained by the customer's primary carrier. The order fulfillment center informs the master controller of the request; See col. 5, lines 54-61 and col. 6, lines 17-27**);

provisioning at least one logical circuit (**at least one channel in each circuit; See col. 1, lines 61-62**) in the data network for routing the customer data (**The master controller accesses the database to examine the record of the circuits in the collective network maintained by the LECs and the CAP and the IXC as a first step in providing the needed conductivity between the customer premises. Once the master controller has identified those available circuits that have the requisite bandwidth and have suitable locations, then the master controller selects from the identified circuits of a group of circuits for interconnection to provide the needed conductivity; See col. 6, lines 44-48**), wherein the provisioning the at least one logical circuit comprises, without manual intervention (**Using the map, appropriate circuits are identified and then interconnected by providing appropriate control signals to the various DACDs to achieve the desired conductivity without manual intervention; See col. 7, lines 31-35**), provisioning the at least one logical circuit through a first local access and transport area (**a first customer premises served by a first local exchange carrier; See Fig. 1, #12 and #14; col. 2, lines 53-54**), a second local access and transport area (**a second customer premises served by a second LEC; See Fig. 1, #16 and #18; col. 2, lines 55-56**), and an inter-exchange carrier (**Inter-Exchange (IXC) carrier; See Fig. 1, #20 and col. 2, lines 59-61**), and wherein the logical circuit includes a first variable communication paths to route the data through the first local access and transport area (**The PBX and the T1 Channel**

bank at the first customer premises may be coupled by one or ore dedicated channels in a circuit of at least T1 bandwidth to a first Digital Access Cross-Connect Device (DACD); See col. 3, lines 52-56), second variable communication paths to route the data through the second local access and transport area (**The DACD 66 is coupled to the PBX and the T1 channel bank at the second customer premises via one or more channels in a multi-channel circuit of at least T1 bandwidth; See col. 4, lines 13-16**), and fixed communication paths to route the data between the first local access and transport area, the second local access and transport area, and the inter-exchange carrier (**The DACD 50 is coupled to a DACD 54 at the IXC via a multi-channel circuit of at least T1 bandwidth. The DACD 54 is coupled via a multi-channel circuit of the same bandwidth as the circuit 55 to another DACD 58 maintained by the IXC. A multi-channel circuit of at least T1 bandwidth couples the DACD 58 to a DACD 62 at the serving wire center of the second LEC; See col. 4, lines 2-10**).

Cerciello fails to teach of the time period associated with customer order and provisioning, adding the circuit to a deletion batch and disconnecting the logical circuit at the end of the time period.

Sibbitt teaches of:

receiving at least one customer order for routing data in the data network for a predetermined time period (**An end user at any node can log into the controller and send instructions as to the bandwidth desired between nodes and the exact time that such bandwidth will be required; See col. 2, lines 36-39**);

provisioning at least one logical circuit in the data network for routing the customer data during the predetermined time period (**The controller determines that the end user has authorization to use the requested bandwidth during the time of the requested period and then looks for channels of the communication facilities between the end points requested which will be idle during the prospective time period. Once the path is identified, then available bandwidth through the path must be selected and reserved. Once this is accomplished, the prospective routing is scheduled for use by the initiating end user during the requested time period; See col. 2, lines 40-46 and 49-53**);

adding the at least one logical circuit to a deletion batch (**The original request includes the disconnection time, therefore all connections that are scheduled to be disconnected at the same time will be in the same deletion batch; See Fig. 10, #1007 and Fig. 12**); and

disconnecting the at least one logical circuit at the end of the predetermined time period (**The end time of the active circuit is interpreted as disconnection of the circuit; See Fig. 10, #1007 and Fig. 12**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the method of Cerciello to include the time period associated with the customer order and provisioning, adding the logical circuit to a deletion batch and disconnecting the logical circuit at the end of the predetermined time period taught by Sibbitt in order to determine the time frame during which the circuit needs to be active and subsequently disconnected in order to free up resources.

Regarding claim 2, Cerciello teaches the method of claim 1, but fails to teach of wherein provisioning the at least one logical circuit comprises provisioning the at least one logical circuit prior to the start of the predetermined time period.

Sibbitt teaches of provisioning the at least one logical circuit prior to the start of the predetermined time period (**At the scheduled period of time, or slightly therebefore, the controller begins an assessment of the continued availability of the previously selected channels to insure that quality communications will be possible during the scheduled period; See col. 2, lines 54-57**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the method of Cerciello to include provisioning the at least one logical circuit prior to the start of the predetermined time period taught by Sibbitt in order to schedule the time frame during which the circuit needs to be active in advance.

Regarding claim 3, Cerciello still fails to teach the method of claim 2, wherein provisioning the at least one logical circuit prior to the start of the predetermined time period comprises determining a maintenance window prior to the start of the predetermined time period and provisioning the at least one logical circuit during the maintenance window.

Sibbitt teaches of provisioning the at least one logical circuit prior to the start of the predetermined time period comprising:

> determining a maintenance window prior to the start of the predetermined time period (**The original request includes the connection time, which can be used as the maintenance window; See Fig. 10, #1006 and Fig. 12**); and
>
> provisioning the at least one logical circuit during the maintenance window (**Provisioning of the circuit occurs during the time requested; See Fig. 10, #1006 and Fig. 12**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the method of Cerciello to include determining a maintenance window prior to the start of the predetermined time period and provisioning the at least one logical circuit during the maintenance window taught by Sibbitt in order to determine the time frame during which the circuit needs to be active.

Regarding claim 4, Cerciello teaches the method of claim 1, but fails to teach of disconnecting the at least one logical circuit at the end of the predetermined time period comprises disconnecting the at least one logical circuit following the end of the predetermined time period.

Sibbitt teaches of disconnecting the at least one logical circuit at the end of the predetermined time period comprising disconnecting the at least one logical circuit following the end of the predetermined time period (**The original request includes the disconnection time, therefore the end time of the active circuit is interpreted as disconnection of the circuit; See Fig. 10, #1007 and Fig. 12**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the method of Cerciello to include disconnecting the logical circuit at the end of the predetermined time period comprising disconnecting the at least one logical circuit following the end of the predetermined time period taught by Sibbitt in order to determine the time frame during which the circuit needs to be disconnected thereby freeing up resources.

Regarding claim 5, Cerciello still fails to teach the method of claim 4, wherein disconnecting the at least one logical circuit following the end of the predetermined time period comprises determining a maintenance window following the end of the predetermined time period and disconnecting the at least one logical circuit during the maintenance window.

Sibbitt teaches of disconnecting the at least one logical circuit following the end of the predetermined time period comprising:

determining a maintenance window following the end of the predetermined time period (**The original request includes the disconnection time, which can be used as the maintenance window; See Fig. 10, #1007 and Fig. 12**); and

disconnecting the at least one logical circuit during the maintenance window (**The end time of the active circuit is interpreted as disconnection of the circuit; See Fig. 10, #1007 and Fig. 12**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the method of Cerciello to include determining a maintenance window following the end of the predetermined time period and disconnecting the logical circuit during the maintenance window taught by Sibbitt in order to determine the time frame during which the circuit needs to be disconnected in order to free up resources.

Regarding claim 15, Cerciello teaches a system for provisioning logical circuits for intermittent use in a data network, the system comprising:

at least one network device to establish a communication path for at least one logical circuit in the data network (**The access controller is responsive to commands from the master controller and serves to generate and supply provisioning commands to the DACDs to cause each DACD to appropriately map the channels in the circuits coupled to it to provide conductivity between the first customer premises and the second customer premises; See col. 5, lines 44-50**); and

a network management module (**master controller; See Fig. 1, #78**) to:

receive at least one customer order for routing data in the data network (**A request is made for connectivity of a specified bandwidth between the customer premises. A customer requesting a change in service makes that request to an order fulfillment center coupled to the master controller that is maintained by the customer's primary carrier. The order fulfillment center informs the master controller of the request; See col. 5, lines 54-61 and col. 6, lines 17-27**); and

provision the at least one logical circuit (**at least one channel in each circuit; See col. 1, lines 61-62**) for routing the customer data (**The master controller accesses the database to examine the record of the circuits in the collective network maintained by the LECs and the CAP and the IXC as a first step in providing the needed conductivity between the customer premises. Once the master controller has identified those available circuits that have the requisite bandwidth and have suitable locations, then the master controller selects from the identified circuits of a group of circuits for interconnection to provide the needed conductivity; See col. 6, lines 44-48**), wherein provisioning the at least one logical circuit comprises, without manual intervention (**Using the map, appropriate circuits are identified and then interconnected by providing appropriate control signals to the various DACDs to achieve the desired conductivity without manual intervention; See col. 7, lines 31-35**), provisioning the at least one logical circuit through a first local access and transport area (**a first customer premises served by a first local exchange carrier; See Fig. 1, #12 and #14; col. 2, lines 53-54**), a second local access and transport area (**a second customer premises served by a second LEC; See Fig. 1, #16 and #18; col. 2, lines 55-56**), and an inter-exchange carrier (**Inter-Exchange (IXC) carrier; See Fig. 1, #20 and col. 2, lines 59-61**), and wherein the at least one

logical circuit includes first variable communication paths to route the data through the first local access and transport area (**The PBX and the T1 Channel bank at the first customer premises may be coupled by one or ore dedicated channels in a circuit of at least T1 bandwidth to a first Digital Access Cross-Connect Device (DACD); See col. 3, lines 52-56**), second variable communication paths to route the data through the second local access and transport area (**The DACD 66 is coupled to the PBX and the T1 channel bank at the second customer premises via one or more channels in a multi-channel circuit of at least T1 bandwidth; See col. 4, lines 13-16**), and fixed communication paths to route the data between the first local access and transport area, the second local access and transport area, and the inter-exchange carrier (**The DACD 50 is coupled to a DACD 54 at the IXC via a multi-channel circuit of at least T1 bandwidth. The DACD 54 is coupled via a multi-channel circuit of the same bandwidth as the circuit 55 to another DACD 58 maintained by the IXC. A multi-channel circuit of at least T1 bandwidth couples the DACD 58 to a DACD 62 at the serving wire center of the second LEC; See col. 4, lines 2-10**).

Cerciello fails to teach of the time period associated with customer order and provisioning, adding the circuit to a deletion batch and disconnecting the logical circuit at the end of the time period.

Sibbitt teaches of:

at least one network device (**Digital cross-connect; See Fig. 1, #11**) to establish a communications path for at least one logical circuit in the data network (**When the time comes to set up that connection, the controller will wake up, send the commands to the individual cross-connects so that they will make the connections and effect the end-to-end circuit from one customer premise to another; See col. 4, lines 10-15**); and

a network management module (**network controller; See Fig. 1, #40**) to:

receive at least one customer order for routing data in the data network during a predetermined time period (**An end user at any node can log into the controller and send instructions as to the bandwidth desired between nodes and the exact time that such bandwidth will be required; See col. 2, lines 36-39**);

provision the at least one logical circuit for routing the customer data during the predetermined time period (**The controller determines that the end user has authorization to use the requested bandwidth during the time of the requested period and then looks for channels of the communication facilities between the end points requested which will be idle during the prospective time period. Once the path is identified, then available bandwidth through the path must be selected and reserved. Once this is accomplished, the prospective routing is scheduled for use by the initiating end user during the requested time period; See col. 2, lines 40-46 and 49-53**);

add the at least one logical circuit to a deletion batch (**The original request includes the disconnection time, therefore all connections that are scheduled to be disconnected at the same time will be in the same deletion batch; See Fig. 10, 1007 and Fig. 12**); and

disconnect the at least one logical circuit following the end of the predetermined time period (**The end time of the active circuit is interpreted as disconnection of the circuit; See Fig. 10, #1007 and Fig. 12**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the system of Cerciello to include the time period associated with the customer order and provisioning, adding the logical circuit to a deletion batch and disconnecting the logical circuit at the following the end of the predetermined time period taught by Sibbitt in order to determine the time frame during which the circuit needs to be active and subsequently disconnected in order to free up resources.

Regarding claim 16, Cerciello teaches the system of claim 15, but fails to teach of the network management module, in provisioning the at least one logical circuit, is operative to provision the at least one logical circuit prior to the start of the predetermined time period.

Sibbitt teaches of the network management module, in provisioning the at least one logical circuit, is operative to provision the at least one logical circuit prior to the start of the predetermined time period (**At the scheduled period of time, or slightly therebefore, the controller begins an assessment of the continued availability of the previously selected channels to insure that quality communications will be possible during the scheduled period; See col. 2, lines 54-57**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the system of Cerciello to include the network management module provisioning the at least one logical circuit prior to the start of the predetermined time period taught by Sibbitt in order to schedule the time frame during which the circuit needs to be active in advance.

Regarding claim 17, Cerciello still fails to teach the system of claim 16, wherein the network management module, in provisioning the at least one logical circuit prior to the start of the predetermined time period, is operative to determine a maintenance window prior to the start of the predetermined time period and provision the at least one logical circuit during the maintenance window.

Sibbitt teaches of the network management module, in provisioning the at least one logical circuit prior to the start of the predetermined time period being operative to:

> determine a maintenance window prior to the start of the predetermined time period (**The original request includes the connection time, which can be used as the maintenance window; See Fig. 10, #1006 and Fig. 12**); and
>
> provision the at least one logical circuit during the maintenance window (**Provisioning the circuit occurs during the time requested; See Fig. 10, #1006 and Fig. 12**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the system of Cerciello to include the network management module determining a maintenance window prior to the start of the predetermined time period and provisioning the at least one logical circuit during the maintenance window taught by Sibbitt in order to determine the time frame during which the circuit needs to be active.

Regarding claim 18, Cerciello teaches the system of claim 15, but fails to teach of the network management module, in disconnecting the at least one logical circuit following the end of the predetermined time period, is operative to determine a maintenance window following the end of the predetermined time period and disconnect the at least one logical circuit during the maintenance window.

Sibbitt teaches of the network management module being operative to:

determine a maintenance window following the end of the predetermined time period (**The original request includes the disconnection time, which can be used as the maintenance window; See Fig. 10, #1007 and Fig. 12**); and

disconnect the at least one logical circuit during the maintenance window (**The end time of the active circuit is interpreted as disconnection of the circuit; See Fig. 10, #1007 and Fig. 12**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the system of Cerciello to include the network management module determining a maintenance window prior to the start of the predetermined time period and provisioning the at least one logical circuit during the maintenance window taught by Sibbitt in order to determine the time frame during which the circuit needs to be active.

Regarding claim 26, Cerciello teaches a method for provisioning logical circuits for routing logical circuit data in a data network during a predetermined time period, the method comprising:

receiving at least one customer order for routing the logical data in the data network (**A request is made for connectivity of a specified bandwidth between the customer premises. A customer requesting a change in service makes that request to an order fulfillment center coupled to the master controller that is maintained by the customer's primary carrier. The order fulfillment center informs the master controller of the request; See col. 5, lines 54-61 and col. 6, lines 17-27**); and

provisioning the at least one logical circuit (**at least one channel in each circuit; See col. 1, lines 61-62**) for routing the customer data (**The master controller accesses the database to examine the record of the circuits in the collective network maintained by the LECs and the CAP and the IXC as a first step in providing the needed conductivity between the customer premises. Once the master controller has identified those available circuits that have the requisite bandwidth and have suitable locations, then the master controller selects from the identified circuits of a group of circuits for interconnection to provide the needed conductivity; See col. 6, lines 44-48**), wherein provisioning the at least one logical circuit comprises, without manual intervention (**Using the map, appropriate circuits are identified and then interconnected by providing appropriate control signals to the various DACDs to achieve the desired conductivity without manual intervention; See col. 7, lines 31-35**), provisioning the at least one logical circuit through a first local access and transport area (**a first customer premises served by a first local exchange carrier; See Fig. 1, #12 and #14; col. 2, lines 53-54**), a second local access and transport area (**a second customer premises served by a second LEC; See Fig. 1, #16 and #18; col. 2, lines 55-56**), and an inter-exchange carrier (**Inter-Exchange (IXC) carrier; See Fig. 1, #20 and col. 2, lines 59-61**), and wherein the at least one logical circuit includes first variable communication paths to route the data through the first local access and transport area (**The PBX and the T1 Channel bank at the first customer**

premises may be coupled by one or ore dedicated channels in a circuit of at least T1 bandwidth to a first Digital Access Cross-Connect Device (DACD); See col. 3, lines 52-56), second variable communication paths to route the data through the second local access and transport area (**The DACD 66 is coupled to the PBX and the T1 channel bank at the second customer premises via one or more channels in a multi-channel circuit of at least T1 bandwidth; See col. 4, lines 13-16**), and fixed communication paths to route the data between the first local access and transport area, the second local access and transport area, and the inter-exchange carrier (**The DACD 50 is coupled to a DACD 54 at the IXC via a multi-channel circuit of at least T1 bandwidth. The DACD 54 is coupled via a multi-channel circuit of the same bandwidth as the circuit 55 to another DACD 58 maintained by the IXC. A multi-channel circuit of at least T1 bandwidth couples the DACD 58 to a DACD 62 at the serving wire center of the second LEC; See col. 4, lines 2-10**).

Sibbitt teaches of:

receiving at least one customer order for routing the logical data in the data network during the predetermined time period (**An end user at any node can log into the controller and send instructions as to the bandwidth desired between nodes and the exact time that such bandwidth will be required; See col. 2, lines 36-39**);

determining a maintenance window prior to the start of the predetermined time period (**The original request includes the connection time, which can be used as the maintenance window; See Fig. 10, #1006 and Fig. 12**);

provisioning the at least one logical circuit during the maintenance window (**The controller determines that the end user has authorization to use the requested bandwidth during the time of the requested period and then looks for channels of the communication facilities between the end points requested which will be idle during the prospective time period. Once the path is identified, then available bandwidth through the path must be selected and reserved. Once this is accomplished, the prospective routing is scheduled for use by the initiating end user during the requested time period; See col. 2, lines 40-46 and 49-53**);

determining a maintenance window following the end of the predetermined time period (**The original request includes the disconnection time, which can be used as the maintenance window; See Fig. 10, #1007 and Fig. 12**); and

disconnecting the at least one logical circuit during the maintenance window (**The end time of the active circuit is interpreted as disconnection of the circuit; See Fig. 10, #1007 and Fig. 12**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the method of Cerciello to include the time period associated with the customer order and provisioning, adding the logical circuit to a deletion batch and disconnecting the logical circuit at the following the end of the predetermined time period taught by Sibbitt in order to determine the time frame during which the circuit needs to be active and subsequently disconnected in order to free up resources.

6. Claims 6-7 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cerciello in view of Sibbitt in further view of Hollman et al. (**U.S. Patent No. 7,146,000**), hereinafter referred to as Hollman.

Regarding claim 6, while Cerciello teaches of the database of the network controlled by the controller (**See col. 5, lines 26-27**), Cerciello fails to teach of generating trap data. Cerciello in view of Sibbitt further fails to teach of generating trap data for each logical circuit during the predetermined time period, wherein the trap data comprises utilization statistics.

Hollman teaches generating trap data for each logical circuit during the predetermined time period, wherein the trap data comprises utilization statistics for the at least one logical circuit (**The routing engine determines the available capacity between the source and destination, which is equivalent to the database of Cerciello. Service type and bandwidth information dictate which specific routing policy rules to use. The routing process then builds a capacity graph including only the filtered set of capacity links between the source and destination. The capacity graph is interpreted as having the utilization statistics for the circuit connection and that would be obtained during the provisioning and be maintained as part of the availability information indicated by Cerciello; See Fig. 10, #1008; col. 1, lines 66-67 and col. 2 lines 1-3**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the method of Cerciello in view of Sibbitt to include generating trap data for each logical circuit during the predetermined time period, wherein the trap data comprises utilization statistics taught by Hollman in order to constantly manage the bandwidth.

Regarding claim 7, Cerciello in view of Sibbitt still fails to teach of the utilization statistics including the percent utilization of the circuit during the predetermined time period.

Hollman teaches of the utilization statistics comprising the percent utilization of the at least one logical circuit during the predetermined time period (**The capacity graph is interpreted to have the percent of the utilization for the circuit connection; See col. 1, lines 66-67 and col. 2 lines 1-3**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the method of Cerciello in view of Sibbitt to include the utilization statistics comprising percent utilization taught by Hollman in order to constantly manage the bandwidth.

Regarding claim 19, Cerciello teaches the system of claim 15, further comprising a logical element module (**database that maintains a record of both the bandwidth and the location of each circuit, as well as its availability; See col. 5, lines 26-27**), in communication with the at least one network device and the network management module.

Cerciello in view of Sibbitt fails to teach of the module receiving trap data generated by the network device.

Hollman teaches of a logical element module (**A routing engine, which is equivalent to the database of Cerciello, as this is relied upon to obtain the capacity and availability; See col. 5, lines 40-43**) to receive trap data generated by the at least one network device, wherein the trap data comprises a percent utilization of the at least one logical circuit during the predetermined time period (**The capacity graph is interpreted as having the utilization statistics for the circuit connection; See col. 1, lines 66-67 and col. 2 lines 1-3**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the system of Cerciello in view of Sibbitt to include a logical element module that receives trap data comprising a percent utilization taught by Hollman in order to constantly manage bandwidth.

7. Claims 8-11 and 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cerciello in view of Sibbitt in further view of Chiu et al. (**U.S. Patent No. 6,597,689**), hereinafter referred to as Chiu.

Regarding claims 8 and 20, Cerciello in view of Sibbitt fails to teach the method/system of claims 1 and 15, respectively, wherein the customer order comprises a quality of service parameter for the logical circuit.

Chiu teaches of provisioning the quality of service requested (**Quality of service could be implemented to "fairly" prioritize the various data received; See col. 5, lines 7-10**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the method/system of Cerciello in view of Sibbitt to include quality of service parameters taught by Chiu in order to maintain an acceptable level of service for data transmission.

Regarding claims 9 and 21, Cerciello in view of Sibbitt fails to teach the method/system of claims 8 and 20, wherein the quality of service parameter comprises at least one of an unspecified bit rate; a variable bit rate; and a committed bit rate.

Chiu teaches of various quality of service parameters (**The service class may include CBR, rt-VBR, nrt-VBR, ABR or UBR; See col. 5, lines 15-19**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the method/system of Cerciello in view of Sibbitt to include quality of service parameters taught by Chiu in order to maintain an acceptable level of service for data transmission.

Regarding claims 10-11 and 22-23, Cerciello in view of Sibbitt fails to teach the method/system of claims 1 and 15, wherein the at least one logical circuit is a permanent virtual circuit or switched virtual circuit.

Chiu teaches of the circuit being a PVC or SVC (**Two types of virtual connections are PVCs and SVCs**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the method/system of Cerciello in view of Sibbitt to include the circuits being PVCs or SVCs taught by Chiu in order to reduce the amount of resources being used.

8. Claims 27-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cerciello in view of Sibbitt in further view of Naven et al. (**U.S. Patent No. 6,810,043**), hereinafter referred to as Naven.

Regarding claim 27, Cerciello teaches the method of claim 1, but fails to teach of receiving a second customer order for routing second data in the data network for a second time period, wherein the at least one customer order is received at a first time of receipt and the second customer order is received at a second time of receipt.

Sibbitt teaches of:

> receiving a second customer order for routing second data in the data network for a second time period (**Schedule ID 111; See Fig. 10**), wherein the at least one customer order is received at a first time of receipt (**Schedule ID 113; See Fig. 10**) and the second customer order is received at a second time of receipt (**In Fig. 10, multiple requests are received, some of which are on separate dates, such as Schedule IDs 113 and 111**).

While Sibbitt teaches of the requests, there is no set time range set up to determine the maintenance window. Cerciello in view of Sibbitt fails to teach of selecting a first maintenance window to provision the circuit based on a first time of receipt being within a first range corresponding to the maintenance window, and selecting the maintenance window for the second order based on the time of receipt of the request.

Naven teaches of:

selecting a first maintenance window to provision the at least one logical circuit based on the first time of receipt being within a first time of receipt range corresponding to the first maintenance window (**The master calendar holds entries corresponding to events that are to occur within a preselected master-calendar scheduling range, therefore all requests that are received are input into the master calendar to be set up for provisioning at the scheduled time; See Abstract lines 3-5**);

when the second time of receipt corresponding to the second customer order is within the first time of receipt range, selecting the first maintenance window to provision a second logical circuit corresponding to the second customer order (**If the second request fits into the time of the master-calendar scheduling range then it is provided the same maintenance window as the first request; See Abstract lines 3-5**); and

when the second time of receipt corresponding to the second customer order is not within the first time of receipt range, selecting a second maintenance window to provision the second logical circuit (**If the interval between the current time and a desired scheduling time exceeds said scheduling range, the entry is put in the slave calendar until the scheduling range for that request arrives; See Abstract lines 5-7 and 10-12**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the method of Cerciello in view of Sibbitt to include selecting a first maintenance window to provision the circuit based on a first time of receipt being within a first range corresponding to the maintenance window, and selecting the maintenance window for the second order based on the time of receipt of the request taught by Naven in order to allow various connections to be made without requiring complicated processing of the calendar entries when the scheduling results in widely disparate intervals.

Regarding claim 28, Cerciello in view of Sibbitt further fails to teach the method of claim 27, wherein the first maintenance window occurs during a time range during which a plurality of logical connections assigned to the first maintenance window are provisioned based on customer orders corresponding to the plurality of logical connections having been received during the first time of receipt range.

Naven teaches of the first maintenance window occurring during a time range when multiple connections are provisioned based on the first time of receipt range (**See Abstract lines 3-5**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the method of Cerciello in view of Sibbitt to include the first maintenance window occurring during a time range during which a plurality of logical connections assigned to the first maintenance window are provisioned based on customer orders corresponding to the plurality of logical connections having been received during the first time of receipt range taught by Naven in order to allow for multiple circuits to be provisioned at the same time thereby increases network productivity.

Regarding claim 29, Cerciello teaches the system of claim 15, but fails to teach of the network management module being used further to receive second customer order for routing second data in the data network for a second time period, wherein the at least one customer order is received at a first time of receipt and the second customer order is received at a second time of receipt.

Sibbitt teaches of the network management module to:

receive a second customer order for routing second data in the data network for a second time period (**Schedule ID 111; See Fig. 10**), wherein the at least one customer order is received at a first time of receipt (**Schedule ID 113; See Fig. 10**) and the second customer order is received at a second time of receipt (**In Fig. 10, multiple requests are received, some of which are on separate dates, such as Schedule IDs 113 and 111**).

While Sibbitt teaches of the requests, there is no set time range set up to determine the maintenance window. Cerciello in view of Sibbitt fails to teach of selecting a first maintenance window to provision the circuit based on a first time of receipt being within a first range corresponding to the maintenance window, and selecting the maintenance window for the second order based on the time of receipt of the request.

Naven teaches of:

select a first maintenance window to provision the at least one logical circuit based on the first time of receipt being within a first time of receipt range corresponding to the first maintenance window (**The master calendar holds entries corresponding to events that are to occur within a preselected master-calendar scheduling range, therefore all requests that are received are input into the master calendar to be set up for provisioning at the scheduled time; See Abstract lines 3-5**);

when the second time of receipt corresponding to the second customer order is within the first time of receipt range, select the first maintenance window to provision a second logical circuit corresponding to the second customer order (**If the second request fits into the time of the master-calendar scheduling range then it is provided the same maintenance window as the first request; See Abstract lines 3-5**); and

when the second time of receipt corresponding to the second customer order is not within the first time of receipt range, select a second maintenance window to provision the second logical circuit (**If the interval between the current time and a desired scheduling time exceeds said scheduling range, the entry is put in the slave calendar until the scheduling range for that request arrives; See Abstract lines 5-7 and 10-12**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the system of Cerciello in view of Sibbitt to include selecting a first maintenance window to provision the circuit based on a first time of receipt being within a first range corresponding to the maintenance window, and selecting the maintenance window for the second order based on the time of receipt of the request taught by Naven in order to allow various connections to be made without requiring complicated processing of the calendar entries when the scheduling results in widely disparate intervals.

Regarding claim 30, Cerciello in view of Sibbitt further fails to teach the system of claim 29, wherein the first maintenance window occurs during a time range during which a plurality of logical connections assigned to the first maintenance window are provisioned based on customer orders corresponding to the plurality of logical connections having been received during the first time of receipt range.

Naven teaches of the first maintenance window occurring during a time range when multiple connections are provisioned based on the first time of receipt range (**See Abstract lines 3-5**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the system of Cerciello in view of Sibbitt to include the first maintenance window occurring during a time range during which a plurality of logical connections assigned to the first maintenance window are provisioned based on customer orders corresponding to the plurality of logical connections having been received during the first time of receipt range taught by Naven in order to allow for multiple circuits to be provisioned at the same time thereby increases network productivity.

Regarding claim 31, Cerciello teaches the method of claim 26, but fails teach of receiving a second customer order for routing second data in the data network for a second time period, wherein the at least one customer order is received at a first time of receipt and the second customer order is received at a second time of receipt.

Sibbitt teaches of:

receiving a second customer order for routing second data in the data network for a second predetermined time period (**Schedule ID 111; See Fig. 10**), wherein the at least one customer order is received at a first time of receipt (**Schedule ID 113; See Fig. 10**) and the second customer order is received at a second time of receipt (**In Fig. 10, multiple requests are received, some of which are on separate dates, such as Schedule IDs 113 and 111**).

While Sibbitt teaches of the requests, there is no set time range set up to determine the maintenance window. Cerciello in view of Sibbitt fails to teach of selecting a first maintenance window to provision the circuit based on a first time of receipt being within a first range corresponding to the maintenance window, and selecting the maintenance window for the second order based on the time of receipt of the request.

Naven teaches of:

selecting a first maintenance window to provision the at least one logical circuit based on the first time of receipt being within a first time of receipt range corresponding to the first maintenance window (**The master calendar holds entries corresponding to events that are to occur within a preselected master-calendar scheduling range, therefore all requests that are received are input into the master calendar to be set up for provisioning at the scheduled time; See Abstract lines 3-5**);

when the second time of receipt corresponding to the second customer order is within the first time of receipt range, selecting the first maintenance window to provision a second logical circuit corresponding to the second customer order (**If the second request fits into the time of the master-calendar scheduling range then it is provided the same maintenance window as the first request; See Abstract lines 3-5**); and

when the second time of receipt corresponding to the second customer order is not within the first time of receipt range, selecting a second maintenance window to provision the second logical circuit (**If the interval between the current time and a desired scheduling time exceeds said scheduling range, the entry is put in the slave calendar until the scheduling range for that request arrives; See Abstract lines 5-7 and 10-12**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the method of Cerciello in view of Sibbitt to include selecting a first maintenance window to provision the circuit based on a first time of receipt being within a first range corresponding to the maintenance window, and selecting the maintenance window for the second order based on the time of receipt of the request taught by Naven in order to allow various connections to be made without requiring complicated processing of the calendar entries when the scheduling results in widely disparate intervals.

Regarding claim 32, Cerciello in view of Sibbitt further fails to teach the method of claim 31, wherein the first maintenance window occurs during a time range during which a plurality of logical connections assigned to the first maintenance window are provisioned based on customer orders corresponding to the plurality of logical connections having been received during the first time of receipt range.

Naven teaches of the first maintenance window occurring during a time range when multiple connections are provisioned based on the first time of receipt range (**See Abstract lines 3-5**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the method of Cerciello in view of Sibbitt to include the first maintenance window occurring during a time range during which a plurality of logical connections assigned to the first maintenance window are provisioned based on customer orders corresponding to the plurality of logical connections having been received during the first time of receipt range taught by Naven in order to allow for multiple circuits to be provisioned at the same time thereby increases network productivity.

Conclusion

9. Any response to this action should be **faxed** to (571) 273-8300 or **mailed** to:

Commissioner of Patents,
P.O. Box 1450
Alexandria, VA 22313-1450

Hand delivered responses should be brought to:
Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ASHLEY L. SHIVERS whose telephone number is (571) 270-3523. The examiner can normally be reached on Monday-Friday 8:30-5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chirag Shah can be reached on (571) 272-3144. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. L. S./
Examiner, Art Unit 2419
8/20/2009

/Chirag G Shah/
Supervisory Patent Examiner, Art Unit 2419